

US EPA RECORDS CENTER REGION 5



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Monthly Oversight Report 33
ACS NPL Site
Griffith, Indiana
August 30, 2003 - September 26, 2003



BLACK & VEATCH

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Black & Veatch Special Projects Corp.

USEPA/RAC VII
American Chemical Services RAO (057-ROBF-05J7)

BVSPC Project 46526
BVSPC File C.3
October 3, 2003

Mr. Kevin Adler
U.S. Environmental Protection Agency
77 W. Jackson Boulevard (SR-6J)
Chicago, Illinois 60604-3590

Subject: Monthly Oversight Summary Report
No. 33 for September 2003

Dear Mr. Adler:

Enclosed is the Monthly Oversight Summary Report No. 33 for September 2003 for the American Chemical Services Superfund Site in Griffith, Indiana.

If you have any questions, please call (312-683-7856) or email (campbelllm@bv.com).

Sincerely,

BLACK & VEATCH Special Projects Corp.

Larry M. Campbell, P.E.
Site Manager

Enclosure

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Monthly Oversight Summary Report No. 33
ACS Superfund Site WA57, 46526.238

Reporting Period: Month of September (August 30, 2003 - September 26, 2003)

BVSPC O/S Dates: September 16, 18, and 23, 2003

| Personnel Summary Affiliation | No. of Personnel | Responsibility |
|---------------------------------------|------------------|--------------------------------------|
| Montgomery Watson Harza | 5 | Respondent's General Contractor |
| U.S. Environmental Protection Agency | 1 | Federal Regulatory Agency |
| Black & Veatch Special Projects Corp. | 1 | USEPA Oversight Contractor |
| Independent Environmental Services | 2 | Specialty Contractor |
| Austgen | 2 | Electrical Contractor |
| Ryan Construction | 2 | General Contractor |
| Autumn Industries | 1 | Granular Activated Carbon Contractor |
| Simalabs | 1 | OFCA Engineered Cover Contractor |
| Osmonics | 1 | Nanofiltration Unit Supplier |

Construction Activities

Major Activities:

- Independent Environmental Services removed and repaired the sand filter reject pump in the sand filter.
- Ryan Construction installed the nanofiltration unit and began installing a ventilation fan in the compressor room in the groundwater treatment plant.
- Austgen completed installing the electrical supply for the nanofiltration unit and began programming the control logic for the unit.
- Austgen and Autumn Industries replaced the granular activated carbon in the carbon vessels in the groundwater treatment plant.
- Montgomery Watson Harza re-seeded the biomass in the activated sludge plant, operated the groundwater treatment plant in recirculation mode, and resumed discharging effluent on September 22, 2003.
- Simalabs collected samples from the groundwater treatment plant.
- Montgomery Watson Harza and Osmonics began operation of the nanofiltration unit.

- Austgen established pathways in the wetland area in order for Montgomery Watson Harza to be able to access its monitoring wells.
- Montgomery Watson Harza performed the semiannual groundwater and annual residential well sampling events.
- Montgomery Watson Harza achieved continuous operation of the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction system and began system monitoring in accordance with the *Performance Standard Verification Plan*.
- Montgomery Watson Harza held bi-weekly construction coordination meetings at the site on September 4 and 18, 2003.

Activities Performed:

Independent Environmental Services (IES) removed the sand filter reject pump from the large sand filter in the groundwater treatment plant (GWTP) for repair on September 5, 2003. Montgomery Watson Harza (MWH) reported that IES removed a portion of the sand from the filter in order to remove the pump. MWH disposed of the removed sand and replaced it with new sand. MWH also reported that the work involved harness work and that the appropriate safety precautions were followed.

MWH reported that the nanofiltration unit was delivered to the site on September 11, 2003. Ryan Construction completed the installation of the unit and associated piping. MWH and Osmonics began startup of the nanofiltration unit on Tuesday, September 23, 2003, with water from the city water supply. Austgen began to reprogram the control logic in order for the nanofiltration unit to operate based on the water level in tanks T-1 and T-3. MWH began operating the nanofiltration unit in manual mode on September 26, 2003.

MWH reported that it discharged effluent from the groundwater treatment plant (GWTP) on August 27, 2003, after the completion of the majority of maintenance activities on the plant. MWH reported that the sample results were non-detect for volatile organic compounds (VOCs). However, MWH did observe that the turbidity was elevated after completing the maintenance activities within the GWTP. MWH proceeded to operate the GWTP in recirculation mode; however, it determined through sampling that some of the biomass in the activated sludge plant had died and created elevated turbidity in the water. MWH also reported that the lead granular activated carbon (GAC) vessel was fouled with dead biomass present in the water from the biotank. When MWH began recirculating the flow in the GWTP, it bypassed the GAC vessels to prevent addition fouling of the carbon.

MWH reported that it added a dry seed to the activated sludge tank to promote biomass growth. MWH also reported that it was adding food to the tank to feed the biomass since MWH was not extracting water from the groundwater collection system. Austgen and Autumn Industries removed and replaced the fouled carbon in the GAC vessels in the GWTP on September 8 and 9, 2003. MWH reported that it began operating the GWTP in recirculation mode through the GAC vessels on September 18, 2003, after re-seeding the biomass in the activated sludge plant. Simalabs collected samples from the GWTP to monitor its performance on September 18, 2003. MWH resumed operating the GWTP in treatment mode on Monday, September 22, 2003. MWH reported that it was operating the GWTP at 20 gpm, pulling water from the perimeter groundwater containment system, monitoring wells MW-10C and MW56, and the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA) in-situ soil vapor extraction (ISVE)

system dual phase extraction wells. MWH reported that it will monitor the biomass in the activated sludge plant and may increase the flow of the plant next month to make up for inoperation of the GWTP last month.

Ryan Construction began installing a larger capacity ventilation fan in the compressor room in the GWTP. MWH reported that it has scheduled US Floors to reapply an epoxy floor coating in the GWTP on October 6, 2003. MWH also reported that the GWTP will be shut down during the floor coating installation.

MWH reported that Midwest Environmental, Inc. (MEI) completed the work on the erosion damage in the Off-Site Containment Area (OFCA) engineered cover on August 29, 2003. MWH reported that MEI completed all of the activities outlined in its *Erosion Corrective Actions - Off-Site Area* memorandum. MWH reported that MEI also re-seeded and installed additional erosion control measures around the wood stockpiles on the cover. BVSPC inspected this work and concurs that it was completed in accordance with MWH's *Erosion Corrective Actions - Off-Site Area* memorandum.

Austgen cleared pathways to MWH monitoring wells and piezometers located in the wetlands for easier access. MWH reported that it anticipates maintaining these pathways in the future in order to make the water level monitoring and groundwater sampling activities easier. MWH reported that there are approximately 5 drums of investigation derived waste (IDW) from monitoring well installation activities located at various well locations around the site. MWH reported that it will remove these drums and dispose of them properly offsite.

Black & Veatch Special Projects Corp. (BVSPC) observed MWH conduct groundwater sampling activities for the semiannual groundwater sampling event. MWH collected water level measurements on Monday, September 15, 2003. MWH collected groundwater samples for volatile organic compounds analysis from 16 upper aquifer and 16 lower aquifer monitoring wells. MWH submitted the samples to CompuChem Laboratories for analysis. BVSPC also observed MWH sample from four of the five residential wells for target compound list VOCs and semi-volatile organic compounds, target analyte list metals, cyanide, pesticides, and polychlorinated biphenyls. MWH reported that the electrical power has been reestablished at the house located at 1007 Reder Road (PW-A). MWH resumed collecting samples from this location. During 2002, this home was not sampled during the residential well sampling event, and MWH substituted the well at 1043 Reder Road (PW-T) in its sampling event. MWH reported that 1043 Reder Road will not be sampled during the 2003 event.

MWH reported that it has achieved continuous operation of the ONCA SBPA ISVE system, processing vapors through Thermal Oxidizer Unit 2 during the week of September 1, 2003. MWH reported that all of the ONCA SBPA ISVE system wells are online and that it monitored the system in accordance with the *Performance Standard Verification Plan* (PSVP). MWH also reported that it resumed operating the OFCA ISVE system, pulling vapors from 17 wells, and processing vapors through Thermal Oxidizer Unit 2.

MWH shut down Thermal Oxidizer Unit 2 on Monday, September 22, 2003, to perform maintenance on the ISVE system. MWH added oil to the OFCA blower and installed a level transmitter in the condensate

knockout tank in the ONCA SBPA ISVE system blower shed building #1. MWH reported that it continued to operate the OFCA and ONCA SBPA ISVE systems, processing vapors through Thermal Oxidizer Unit 2. MWH also reported that it continued to perform monitoring of these systems in accordance with the PSVP.

Attached are BVSPC weekly reports No. 131 through 134, correspondence, log book notes, and photographs of the daily activities. BVSPC's crew conducted oversight of the major field activities on September 16, 18, and 23, 2003. BVSPC's crew participated in the bi-weekly construction coordination meeting held on September 4, 2003, via conference call because of the construction inactivity at the site. BVSPC attended the September 18, 2003, construction coordination meeting at the site.

Topics of Concern:

- None to report.

Concern Resolution:

- None to report.

Upcoming Activities:

- US Floors to epoxy coat the GWTP floor on October 6, 2003.
- Austgen to complete programming logic for the nanofiltration unit.
- Ryan Construction to complete installation of the ventilation fan in the GWTP.
- MWH to remove and dispose of the IDW drums from monitoring well installation activities.

Signature: Leigh Peters

Date: September 5, 2003

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Weekly Oversight Summary Report No. 131
ACS Superfund Site WA57, 46526.238

Reporting Period: Week of September 1, 2003.

BVSPC O/S Dates: Cancelled because of limited site activities.

| Personnel Summary Affiliation | No. of Personnel | Responsibility |
|------------------------------------|------------------|---------------------------------|
| Montgomery Watson Harza | 2 | Respondent's General Contractor |
| Independent Environmental Services | 2 | Specialty Contractor |
| Ryan Construction | 2 | General Contractor |
| Austgen | 2 | Electrical Contractor |

Construction Activities

Major Activities:

- Independent Environmental Services removed and repaired the sand filter reject pump from the sand filter.
- Ryan Construction continued to install additional piping at the groundwater treatment plant in preparation for the installation of a nanofiltration unit.
- Austgen began installing electrical supply and controls in preparation for the installation of a nanofiltration unit.
- Montgomery Watson Harza continued to operate the groundwater treatment plant in recirculation mode.
- Montgomery Watson Harza reported that it achieved continuous operation of the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction system.
- Montgomery Watson Harza held the bi-weekly construction coordination meeting at the site on September 4, 2003.

Activities Performed:

Independent Environmental Services (IES) removed the sand filter reject pump from the large sand filter in the groundwater treatment plant (GWTP) for repair on September 5, 2003. Montgomery Watson Harza (MWH) reported that IES removed a portion of the sand from the filter in order to remove the pump. MWH disposed of the removed sand and replaced it with new sand. MWH also reported that the work involved harness work and that the appropriate safety precautions were followed.

MWH reported that it discharged effluent from the GWTP on August 27, 2003, after the completion of the majority of maintenance activities on the plant. MWH reported that the sample results were non-detect for volatile organic compounds. However, MWH did observe that the turbidity was elevated after completing the maintenance activities within the GWTP. MWH proceeded to operate the GWTP in recirculation mode; however, it believes that the majority of the biomass in the activated sludge plant may have died and created the elevated turbidity in the water. MWH collected a sample from the biomass on August 28, 2003, to determine if sufficient microbes were present to repopulate the biotank or if an outside seed is required. MWH reported that it will evaluate the results in the upcoming weeks. MWH also reported the lead granular activated carbon (GAC) vessel is fouled with the dead biomass that is present in the water from the biotank. When MWH began recirculating the flow in the GWTP, it bypassed the GAC vessels to prevent addition fouling of the carbon. MWH reported that it scheduled a carbon change-out for Monday, September 8, 2003.

MWH reported that it has scheduled US Floors to reapply an epoxy floor coating in the GWTP on September 22, 2003. MWH also reported that the GWTP will be shut down during the floor coating installation.

Ryan Construction and Austgen continued to install mechanical and electrical upgrades in the GWTP in preparation for the installation of a nanofiltration unit. MWH reported that the nanofiltration unit will be delivered to the site on September 12, 2003.

MWH reported that Midwest Environmental, Inc. (MEI) completed the work on the erosion damage in the Off-Site Containment Area (OFCA) engineered cover on August 29, 2003. MWH reported that MEI completed all of the activities outlined in its *Erosion Corrective Actions - Off-Site Area* memorandum. MWH reported that MEI also re-seeded and installed additional erosion control measures around the wood stockpiles on the cover. BVSPC inspected this work and concurs that it was completed in accordance with MWH's *Erosion Corrective Actions - Off-Site Area* memorandum.

MWH reported that it has achieved continuous operation of the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA) in-situ soil vapor extraction (ISVE) system, processing vapors through Thermal Oxidizer Unit 2. MWH reported that all of the ONCA SBPA ISVE system wells are online and that it will begin monitoring the system in accordance with the *Performance Standard Verification Plan* (PSVP) once the nanofiltration unit is installed and operational. MWH also reported that it resumed operating the OFCA ISVE system, pulling vapors from 17 wells, and processing vapors through Thermal Oxidizer Unit 2.

MWH reported that it will perform the semiannual groundwater sampling event during the week of September 15, 2003. MWH also reported that it will conduct the annual residential well groundwater sampling event during the week of September 22, 2003. MWH reported that electrical power has been reestablished at the house located at 1007 Reder Road (PW-A) and that it will resume collecting samples from this location. During 2002, this home was not sampled during the residential well sampling event, and MWH substituted the well at 1043 Reder Road (PW-T) in its sampling program. MWH reported that 1043 Reder Road will not be sampled during the 2003 event.

MWH held the bi-weekly construction coordination meeting at the site on September 4, 2003. Black & Veatch Special Projects Corp. participated in the bi-weekly construction meeting via conference call because of the limited construction activities at the site.

Topics of Concern:

- None to report.

Concern Resolution:

- None to report.

Upcoming Activities:

- MWH to begin monitoring the ONCA SBPA ISVE system in accordance with the PSVP.
- MWH to evaluate the biomass in the activated sludge plant.
- MWH to change out the carbon in the GAC vessels on September 8, 2003.
- MWH to resume operating the GWTP.
- MWH to install and begin operating the nanofiltration unit.
- US Floors to epoxy coat the GWTP floor on September 22, 2003.
- MWH to perform the semiannual groundwater and annual residential well sampling events.

Signature: Leigh Peters

Date: September 12, 2003

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**WEEKLY CONSTRUCTION MEETING MINUTES
FOR SEPTEMBER 4, 2003 MEETING
AMERICAN CHEMICAL SERVICE, NPL SITE
GRIFFITH, INDIANA**

MEETING DATE: Thursday, September 4, 2003

MEETING TIME: 10:00 AM

MEETING LOCATION: ACS Site – Site Trailer

ATTENDEES: Kevin Adler – U.S. EPA (via telephone)
Prabhakar Kasarabada – IDEM
Leigh Peters– BVSPC (via telephone)
Lee Orosz – MWH
Rob Adams – MWH (via telephone)
Chad Smith – MWH (via telephone)
Jon Pohl – MWH (via telephone)
Matt Mesarch – MWH (via telephone)

TOPICS:

Health and Safety Summary

No health and safety incidents have occurred at the Site since the last meeting on August 21, 2003. Activities at the site during the past two weeks included the continued operation of the groundwater treatment plant (GWTP), operation of the Off-Site Area In-situ Soil Vapor Extraction (ISVE) system and the Still Bottoms Pond Area (SBPA) ISVE system, maintenance of equipment in the GWTP, and repairs of areas of erosion damage in the Off-Site Area.

Groundwater Treatment Plant (GWTP) Status

After the maintenance activities at the GWTP were completed on August 22nd, the system was brought back online; however, it was noted that the plant effluent had an elevated turbidity level. The plant was immediately switched to run in recirculation mode, and it has continued in recirculation. After some investigation, MWH determined that most of the microbes in the activated sludge plant (ME-101) might have died, causing the high turbidity in the plant effluent. In addition, the lead granular activated carbon (GAC) vessel has been fouled with the material being discharged from ME-101. On August 27th, when the turbidity was within a normal discharge range, the effluent was discharged to the wetlands and a compliance sample was collected. The compliance sample was analyzed for volatile organic compounds (VOCs) and pH. No VOCs were detected in the sample indicating that the effluent is in compliance with the chemical discharge requirements. Due to a re-occurrence of the elevated turbidity, the treatment system was switched to run in recirculation mode again after August 27th. While in recirculation mode, the lamella clarifier is being used to remove the floating particulates in the waste

stream. Samples from the biomass in ME-101 were collected on August 28th to determine if there are enough microbes to repopulate ME-101 naturally or if reseedling is required.

The operation of the GWTP is anticipated to be intermittent over the next few weeks due to a change-out of both GAC vessels scheduled for September 15th and an application of an epoxy floor coating scheduled to take place on September 22nd. Both activities could range from one to two days.

The nano-filtration unit, which will be used to reduce the hardness of the make-up water for the thermal oxidizer units, is scheduled to be delivered on September 5th and connected on September 8th. Ryan Construction and Austgen Electric have been onsite during the past week to connect the electrical and controls and piping required for the installation and operation of the nano-filtration unit. Austgen is scheduled to be onsite during the week of September 8th to complete the connection of the nano-filtration unit.

Independent Environmental Services (IES) was onsite September 2nd and 3rd to remove the sand filter reject pump for repair and to remove some sand from the sand filter. This work did involve harness work, which was performed following applicable safety precautions.

Off-Site Area/SBPA ISVE Systems

The SBPA ISVE has been operating with all 46 wells since August 27th, with the vapors being treated by Thermal Oxidizer/Scrubber Unit 2 (Therm Ox 2). Therm Ox 2 began treating vapors from 17 of the Off-Site Area ISVE wells on September 3rd. Based on the continued operation of Therm Ox 2, it appears that the anti-scalant chemical is working.

"Continuous operation" of the SBPA ISVE system has been achieved. Therefore the monitoring will be in accordance with the Performance Standard Verification Plan (PSVP) as soon as the GWTP is back in continuous operation.

Off-Site Area Cover

During the week of August 25th, Midwest Environmental, Inc. (MEI) completed the work detailed in MWH's Off-Site Erosion Correction Actions work plan. As the work was being performed, it was determined that addition of topsoil in the area of extraction well 20C would not be sufficient to alleviate ponding. Therefore, in accordance with the work plan, a perforated high density polyethylene (HDPE) pipe wrapped in geotextile was installed to direct rain water to the retention basin. In addition to work outlined in the work plan, MEI applied seed and placed erosion matting around the mulch and tree pile located in the northeast corner of the site. The Off-Site Area was inspected after the past weekends heavy rains and no issues were noted.

Looking Ahead

| | |
|------------------------------------|--|
| Week of September 8, 2003 | <ul style="list-style-type: none">• GWTP/BWES/PGCS operation• Off-Site ISVE operation• SBPA ISVE operation• Connect nano-filter and complete piping and electrical connections |
| Week of September 15, 2003 | <ul style="list-style-type: none">• GWTP/BWES/PGCS operation• Off-Site ISVE operation• SBPA ISVE operation• 3rd Quarter 2003 well sampling event and 2003 residential well sampling event• Carbon change-out in both vessels |
| Health and Safety Items to Monitor | <u>Items include:</u> <ul style="list-style-type: none">• Electrical hazards associated with installation and connection of the nano-filtration unit• Hazards associated with installing the nano-filtration unit |

Next Bi-weekly Construction Meeting - Thursday, September 18, 2003, 2 p.m.

JDP/RAA/PJV

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Weekly Oversight Summary Report No. 132
ACS Superfund Site WA57, 46526.238

Reporting Period: Week of September 8, 2003.

BVSPC O/S Dates: Cancelled because of limited site activities.

| Personnel Summary Affiliation | No. of Personnel | Responsibility |
|-------------------------------|------------------|------------------------------------|
| Montgomery Watson Harza | 2 | Respondent's General Contractor |
| Autumn Industries | 1 | Granular Activated Carbon Supplier |
| Austgen | 1 | General Contractor |

Construction Activities

Major Activities:

- Austgen and Autumn Industries changed the carbon in the granular activated carbon vessels in the groundwater treatment plant.
- Montgomery Watson Harza re-seeded the biomass population in the activated sludge tank in the groundwater treatment plant.

Activities Performed:

Austgen and Autumn Industries removed and replaced the fouled carbon in the granular activated carbon vessels in the groundwater treatment plant (GWTP) on September 8 and 9, 2003. Montgomery Watson Harza (MWH) replaced the carbon because it became fouled with dead biomass from the activated sludge tank. MWH reported that it added a dry seed to the activated sludge tank to promote biomass growth. MWH also reported that it was adding food to the tank to feed the biomass since MWH is not extracting water from the groundwater collection system. MWH reported that it will monitor the biomass growth and will resume operating the GWTP once the growth has been established.

MWH reported that the nanofiltration unit was delivered to the site on September 11, 2003. MWH also reported that Ryan Construction and Austgen will continue installation of the equipment next week. MWH reported that it will start operating the unit and will have formal training on the equipment during the week of September 22, 2003. MWH reported that it postponed the installation of the epoxy coat on the GWTP floor for the week of September 29, 2003, in order for MWH to test the nanofiltration unit with effluent from the GWTP.

MWH reported that it will perform the semiannual groundwater sampling event during the week of September 15, 2003. MWH also reported that it will conduct the annual residential well groundwater sampling event during the week of September 22, 2003. MWH reported that the electrical power has been reestablished at the house located at 1007 Reder Road (PW-A) and that it will resume collecting

samples from this location. During 2002, this home was not sampled during the residential well sampling event, and MWH substituted the well at 1043 Reder Road (PW-T) in its sampling event. MWH reported that 1043 Reder Road will not be sampled during the 2003 event.

Topics of Concern:

- None to report.

Concern Resolution:

- None to report.

Upcoming Activities:

- MWH to begin monitoring the ONCA SBPA ISVE system in accordance with the PSVP.
- MWH to resume operating the GWTP.
- MWH to install and begin operating the nanofiltration unit.
- US Floors to epoxy coat the GWTP floor on September 29, 2003.
- MWH to perform the semiannual groundwater and annual residential well sampling events.

Signature: Leigh Peters

Date: September 15, 2003

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Weekly Oversight Summary Report No. 133
ACS Superfund Site WA57, 46526.238

Reporting Period: Week of September 15, 2003.

BVSPC O/S Dates: September 16 and 18, 2003.

| Personnel Summary Affiliation | No. of Personnel | Responsibility |
|---------------------------------------|------------------|-----------------------------------|
| Montgomery Watson Harza | 5 | Respondent's General Contractor |
| U.S. Environmental Protection Agency | 1 | Federal Regulatory Agency |
| Black & Veatch Special Projects Corp. | 1 | USEPA Oversight Contractor |
| Austgen | 2 | Electrical and General Contractor |
| Ryan Construction | 3 | General Contractor |
| Simalabs | 1 | GWTP Sampling Contractor |

Construction Activities

Major Activities:

- Austgen established pathways in the wetland area in order for Montgomery Watson Harza to be able to access its monitoring wells.
- Montgomery Watson Harza performed the semiannual groundwater sampling event.
- Ryan Construction continued installing piping for the nanofiltration unit within the groundwater treatment plant.
- Ryan Construction began installing a ventilation fan in the compressor room at the groundwater treatment plant.
- Simalabs collected samples from the groundwater treatment plant.
- Montgomery Watson Harza began operating the groundwater treatment plant in recirculation mode through the activated carbon vessels.

Activities Performed:

Austgen cleared pathways to Montgomery Watson Harza's (MWH) monitoring wells and piezometers located in the wetlands for easier access. MWH reported that it anticipates maintaining these pathways in the future in order to make the water level monitoring and groundwater sampling activities easier. MWH reported that there are approximately 5 drums of investigation derived waste (IDW) from monitoring well installation activities located at various well locations around the site. MWH reported that it will remove these drums and dispose of them properly offsite.

Black & Veatch Special Projects Corp. (BVSPC) observed MWH begin groundwater sampling activities for the semiannual groundwater sampling event. MWH collected water level measurements on Monday, September 15, 2003. MWH began collecting groundwater samples for volatile organic compounds analysis from 16 upper aquifer and 16 lower aquifer monitoring wells. MWH submitted the samples to CompuChem Laboratories for analysis. MWH reported that it would complete the monitoring well sampling and perform the annual residential well sampling next week. MWH reported that the electrical power has been reestablished at the house located at 1007 Reder Road (PW-A) and that it will resume collecting samples from this location. During 2002, this home was not sampled during the residential well sampling event, and MWH substituted the well at 1043 Reder Road (PW-T) in its sampling event. MWH reported that 1043 Reder Road will not be sampled during the 2003 event.

Ryan Construction continued to install piping for the nanofiltration unit delivered to the groundwater treatment plant (GWTP) last week. Austgen also completed installing the electrical connections and control programming for the unit. MWH reported that a representative from Osmonics, the nanofiltration unit supplier, will be onsite next week to provide training on the unit. MWH also reported that it will start the unit with city water in order to confirm that the unit is operating properly. Ryan Construction began installing a larger capacity ventilation fan in the compressor room at the GWTP.

MWH reported that it began operating the groundwater treatment plant in recirculation mode through the carbon vessels on September 18, 2003, after re-seeding the biomass in the activated sludge plant last week. MWH reported that it expects to resume operating the GWTP on September 22, 2003. Simalabs collected samples from the GWTP to monitor the performance of the system.

MWH reported that it rescheduled the installation of the epoxy floor coating in the GWTP for October 6, 2003, in order for Osmonics to test the nanofiltration unit and to allow for the new biomass in the activated sludge plant to establish.

MWH reported that it continued to operate the Off-Site Containment Area and On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction systems, processing vapors through Thermal Oxidizer Unit 2. MWH also reported that it continued to perform monitoring of these systems in accordance with the *Performance Standard Verification Plan*.

MWH held the bi-weekly construction coordination meeting at the site on September 18, 2003.

Topics of Concern:

- None to report.

Concern Resolution:

- None to report.

Upcoming Activities:

- MWH to resume operating the GWTP.

- MWH to begin operating the nanofiltration unit.
- US Floors to epoxy coat the GWTP floor on October 6, 2003.
- MWH to complete the semiannual groundwater and annual residential well sampling events.
- Ryan Construction to complete installation of the ventilation fan in the GWTP.
- MWH to remove and dispose of the IDW drums from monitoring well installation activities.

Signature: Leigh Peters

Date: September 24, 2003

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**WEEKLY CONSTRUCTION MEETING MINUTES
FOR SEPTEMBER 18, 2003 MEETING
AMERICAN CHEMICAL SERVICE, NPL SITE
GRIFFITH, INDIANA**

MEETING DATE: Thursday, September 18, 2003

MEETING TIME: 2:00 PM

MEETING LOCATION: ACS Site - Site Trailer

ATTENDEES: Kevin Adler - U.S. EPA
Leigh Peters - BVSPC
Lee Orosz - MWH
Rob Adams - MWH
Jon Pohl - MWH (via telephone)
Chris Daly - MWH (via telephone)

TOPICS:

Health and Safety Summary

No health and safety incidents have occurred at the Site since the last meeting on September 4, 2003. Activities at the site during the past two weeks included operation of the groundwater treatment plant (GWTP) in recirculation mode, operation of the Off-Site Area In-situ Soil Vapor Extraction (ISVE) system and the Still Bottoms Pond Area (SBPA) ISVE system, maintenance of equipment in the GWTP, and groundwater gauging and sampling.

Recent weather conditions caused a tree to fall in the vicinity of piezometer P-29, covering the well. The tree was removed in order for groundwater sampling to occur at this piezometer. While preparing for the groundwater sampling, paths were cut in the brush areas leading to some wells in order to accommodate the sampling. It is anticipated that these paths that were created will be regularly maintained for future sampling events.

Groundwater Treatment Plant (GWTP) Status

After the maintenance activities at the GWTP were completed on August 22nd, the system was brought back online; however, it was noted that the plant effluent had an elevated turbidity level. The plant was immediately switched to run in recirculation mode, and it has continued in recirculation. After some investigation, MWH determined that some of the microbes in the activated sludge plant (ME-101) might have died, causing the high turbidity in the plant effluent. In addition, the lead granular activated carbon (GAC) vessel had been fouled with the floating microbes discharged from ME-101. On August 27th, when the turbidity was within a normal discharge range, the effluent was discharged to the wetlands and a compliance sample was collected. The compliance sample was analyzed for volatile organic compounds (VOCs) and pH. No VOCs were detected in the

sample indicating that the effluent is in compliance with the chemical discharge requirements. Due to a re-occurrence of the elevated turbidity, the treatment system was switched to run in recirculation mode again after August 27th. Water has been discharged on a few other occasions since the August 27th sampling.

Samples collected from the biomass in ME-101 on August 28th indicated that a significant number of microbes were still alive in the biomass. In order to supplement these microbes, additional microbes were obtained from a local vendor and were added to ME-101 on September 8th. These additional microbes will be added to ME-101 on a weekly basis until the population reaches a steady state.

The carbon in the GAC vessels was changed out on September 8th. The plant recirculation water will be sent through the GAC vessels beginning on September 18th and allowed to run in recirculation until the pH is within the discharge limit after this period. At that time the GWTP will be taken out of recirculation mode and allowed to discharge and groundwater will slowly be introduced into the system in order not to shock the microbes in ME-101.

The nano-filtration unit was delivered on September 11th and connected on September 15th. Ryan Construction and Austgen Electric were onsite during the week of September 8th and September 15th to connect the electrical and controls and piping for the nano-filtration unit.

Ryan was been on-site performing minor maintenance around the GWTP. This maintenance included adding a vent to the compressor room, installing a bigger motor to the fan for the compressor room, and fixing minor leaks in the GAC vessels piping.

U.S. Floors is scheduled to be on-site the week of October 6th to apply an epoxy coating to the floor of the GWTP. The GWTP will be shut down for a majority of that week to complete the work.

Off-Site Area/SBPA ISVE Systems

Both ISVE systems have been operating continuously since August 27th with vapors from both systems being treated by Thermal Oxidizer/Scrubber Unit 2 (Therm Ox 2). Samples from the Therm Ox 2 influent and effluent have been collected for the past three weeks. This data will be included in a future monthly status report when it has been properly validated. In addition, monitoring in accordance with the Performance Standard Verification Plan (PSVP) has been performed on the SBPA ISVE system for the past three weeks. The Off-Site ISVE is currently operating 17 wells and the SBPA ISVE system is operating all 46 wells.

A routine maintenance shutdown is scheduled for September 22nd. During this shutdown, the Therm Ox 2 scrubber and other components will be cleaned, oil will be added to the Off-Site blower, and a level controller will be installed on the SBPA blower shed knockout tank. Due to the potential for explosive vapors in the knockout tank, the tank

will be flushed with clean water prior to installing the controller and fresh air will be passed through the tank while the installation is being performed.

SBPA Cover

Construction for installation of the final cover in the SBPA area is anticipated to begin in the spring of 2004.

Well Sampling

The 3rd Quarter 2003 well sampling event and 2003 residential well sampling event occurring at the Site are progressing well. It is anticipated that the sampling will be complete by September 24th.

Looking Ahead

| | |
|------------------------------------|---|
| Week of September 22, 2003 | <ul style="list-style-type: none">• GWTP/BWES/PGCS operation• Off-Site ISVE operation• SBPA ISVE operation• Complete nano-filtration unit installation• Startup nano-filtration unit |
| Week of September 29, 2003 | <ul style="list-style-type: none">• GWTP/BWES/PGCS operation• Off-Site ISVE operation• SBPA ISVE operation |
| Health and Safety Items to Monitor | <u>Items include:</u> <ul style="list-style-type: none">• Electrical hazards associated with installation and startup of the nano-filtration unit• Chemical totes will have to be moved to accommodate U.S. Floors |

Next Bi-weekly Construction Meeting - Thursday, October, 2003, 10 a.m.

JDP/RAA

J:\209\0601 ACS\0202 MWA PM\Meeting Minutes 2003\Meeting Minutes 09-18-03.doc

Weekly Oversight Summary Report No. 134
ACS Superfund Site WA57, 46526.238

Reporting Period: Week of September 22, 2003.

BVSPC O/S Dates: September 23, 2003.

| Personnel Summary Affiliation | No. of Personnel | Responsibility |
|---------------------------------------|------------------|-----------------------------------|
| Montgomery Watson Harza | 5 | Respondent's General Contractor |
| Black & Veatch Special Projects Corp. | 1 | USEPA Oversight Contractor |
| Austgen | 2 | Electrical and General Contractor |
| Ryan Construction | 2 | General Contractor |
| Osmonics | 1 | Nanofiltration Unit Contractor |

Construction Activities

Major Activities:

- Montgomery Watson Harza completed its semiannual groundwater and annual residential well sampling events.
- Montgomery Watson Harza and Osmonics began operation of the nanofiltration unit.
- Ryan Construction completed the electrical controls and piping for the nanofiltration unit and continued installing the ventilation fan in the compressor room.
- Austgen began working on revised programming controls and logic for the nanofiltration unit.
- Montgomery Watson Harza performed maintenance on Thermal Oxidizer Unit 2.
- Montgomery Watson Harza resumed operating the groundwater treatment plant.

Activities Performed:

Black & Veatch Special Projects Corp. (BVSPC) observed Montgomery Watson Harza (MWH) complete the semiannual groundwater and annual residential well sampling events. BVSPC observed MWH sample from four of the five residential wells for target compound list volatile organic compounds and semivolatile organic compounds, target analyte list metals, cyanide, pesticides, and polychlorinated biphenyls. MWH reported that the electrical power has been reestablished at the house located at 1007 Reder Road (PW-A). MWH collected groundwater samples from this location instead of 1043 Reder Road (PW-T) which was substituted for PW-A during the 2002 annual residential well sampling event.

MWH and Osmonics began startup of the nanofiltration unit in the groundwater treatment plant (GWTP) on Tuesday, September 23, 2003, with water from the city water supply. Austgen began to reprogram

the control logic in order for the nanofiltration unit to operate based on the water level in tanks T-1 and T-3. Upon startup of the unit, the effluent pressure from the unit caused the piping installed by Ryan Construction to fail. Ryan Construction replaced the piping on September 24, 2003. MWH began operating the nanofiltration unit in manual mode on September 26, 2003. Ryan Construction also continued installing the ventilation fan in the compressor room located at the GWTP.

MWH resumed operating the GWTP on Monday, September 22, 2003. MWH reported that it was operating the GWTP at 20 gpm, pulling water from the perimeter groundwater containment system, monitoring wells MW-10C and MW56, and the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA) in-situ soil vapor extraction (ISVE) system dual phase extraction wells. MWH reported that it will monitor the biomass in the activated sludge plant and may increase the flow of the plant next week to make up for inoperation of the GWTP last month.

MWH shut down Thermal Oxidizer Unit 2 on Monday, September 22, 2003, to perform maintenance on the ISVE system. MWH added oil to the Off-Site Containment Area (OFCA) blower and installed a level transmitter in the condensate knockout tank in the ONCA SBPA ISVE system blower shed building #1. MWH reported that it continued to operate the OFCA and ONCA SBPA ISVE systems, processing vapors through Thermal Oxidizer Unit 2. MWH also reported that it continued to perform monitoring of these systems in accordance with the *Performance Standard Verification Plan*.

Topics of Concern:

- None to report.

Concern Resolution:

- None to report.

Upcoming Activities:

- US Floors to epoxy coat the GWTP floor on October 6, 2003.
- Austgen to complete programming logic for the nanofiltration unit.
- Ryan Construction to complete installation of the ventilation fan in the GWTP.
- MWH to remove and dispose of the IDW drums from monitoring well installation activities.

Signature: Leigh Peters

Date: September 31, 2003

t:\projects\acs-raos\osr\2003\09\0922.wpd

(156)

8/26/03

- 1125 Roll 47 Photo 18 Looking SE
at N end of extended pipes
under electric conduit in OFCA
- 1133 Roll 47 Photo 19 Looking SW
showing Trencher digging trench
for 4" flexible pipe at E end
of ~~Swale 4~~
- 1145 Roll 47 Photo 20 Looking S
showing MEI removing excess
soil from Swale 3. ~~Looking~~
it to vicinity of tree ~~trunks~~
- 1155 Left Site

John D. Phillips

9/4/03

J. S. Peters

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10:00 B Weekly Construction Meeting

Attendees:

Lee Dross

MWH

Trabakhar Kasarabada IDEM

Via Phone:

Kevin Adler

EPA

Leigh Peters BVSPC

Rob Adams

MWH

Jon Pohl MWH

Chad Smith

MWH

Mike Mesarch MWH

H+S: No issues; IES removed pump from
large sand filter; tied off w/ harness. MEI
working on OFCA; hot weather. Water stations
bug/bee problem - called exterminator and resolved

GWTP: Currently in recirculation since 8/25.
down week of 8/18 for maintenance. Biomass
potentially deceased. MWH sampled and will
have results this week. MWH may need to
provide outside seed. MWH to evaluate
switching to smaller biozone. Carbon
fouled w/ biomass - changeout scheduled
9/15. MWH discharged 1 day + collected
compliance sample. Nanofilter to be delivered
9/5. Austgen/Ryan to install Monday.

ISVE: Thermox 2 at 100% since 8/27; processing
ONCA; added OFCA vapors yesterday. All
ONCA wells open; 17 OFCA wells online

J. S. Peters

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9/4/03
J. G. Brown

MWH to start PVP monitoring of ONCA
 after notification with operations.
 OCA: MEI completed items on erosion repair
 stand resided and added erosion control
 near wood piles. MWH added perforated
 pipe in south 4 to facilitate drainage.
 Austgen: onsite adding electrical supply for new
 filtration unit. Will return Monday.
 GW: sampling of 300r semiannual to start
 9/15. Annual resistor scheduled
 9/22. MWH sampling 100T reader PW-A,
 original was instead of 1043 reader PW-T
 that was sampled last year b/c PW-A had
 no power.
 Look ahead: Nanotiter installation with Ryan and
 Avergen 9/8 + 9/9.
 USFlow to local pump floor 9/22
 Carbon charger 9/22 to 9/15
 Resed blank
 HTS: notification of new electrical job; brief
 USFloors on electrical and chemicals
 in SWP.
 1040 MWH conclude. Next meeting 9/10 @ 10 am

Top of 1040

9/16/03
J. G. Brown

0740 - Arrive onsite, 65 F - forecast 78°, clear
 light SE wind.
 Personnel present
 Lee Orosz
 Leigh Peters
 T. M. Kirkland
 Austgen
 MWH
 BVSRC
 spoke with Lee Orosz; he reported brick
 resided, but MWH still operating in
 resedulation. Stivalas to be out on Thurs
 to collect samples and see levels of turbidity.
 MWH to then operate with resedulation through
 the carbon units to eliminate metals. Plan to
 deliver delivered, Ryan + Austgen to complete
 installation this week + start up on 9/22.
 Austgen allowing path in wetlands for access
 to wells by MWH's take vehicle. OCA
 and ONCA IVE systems operating through
 Thruway 2. MWH to conduct GMS sampling
 this week.
 0810 went to OCA to inspect erosion mitigation.
 Observed grass has been established
 where ECA added riprap and seed in August.
 0812 Roll 48 photo taking SE of riprap placed
 over dirt pile and adjacent drainage pipe
 in SE portion of OCA where electrical sampling

Top of 1040

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9/16/03

Jeff E. Patten

- 0814 Roll 48 Photo 2 facing NE showing erosion blanket installed on NE corner of OFM near swale 3 cleaned of soil.
- 0815 Roll 48 Photo 3 facing W of geotextile-wrapped perforated pipe installed in swales 2, 3 and 4.
- 0816 Roll 48 Photo 4 facing NW at ground showing drainage pipes and depth of placement.
- 0820 Roll 48 Photo 5 facing SE of drainage pipe installed at swales 2 & 3, meeting at location of former ponding near E. 20C.
- 0825 Roll 48 Photo 6 facing E of extended rip rap at entry to retention pond that was attached to the buried electric TP fiber optic conduit (log book location).
- 0830 Roll 48 Photo 7 facing N of erosion blanket along swale 1 and additional rip rap placed at former location of swale 5 near P116.
- 0845 Returned to GWT; R. Skinn of MWH reported that the water quality meter broke yesterday - waiting for replacement from FedEx; don't expect until 10am. Also, MWH measured most of water.
- Continued in Field Log Book 17

Jeff E. Patten

CURVE TABLES

HOW TO USE CURVE TABLES

Table I. contains Tangents and External to a 1° curve. Tan. and Ext. to any other radius may be found nearly enough, by dividing the Tan. or Ext. opposite the given Central Angle by the given degree of curve.

To find Deg. of Curve, having the Central Angle and Tangent: Divide Tan. opposite the given Central Angle by the given Tangent.

To find Deg. of Curve, having the Central Angle and External: Divide Ext. opposite the given Central Angle by the given External.

To find Nat. Tan. and Nat. Ex. Sec. for any angle by Table I.: Tan. or Ext. of twice the given angle divided by the radius of a 1° curve will be the Nat. Tan. or Nat. Ex. Sec.

EXAMPLE

Wanted a Curve with an Ext. of about 12 ft. Angle of Intersection or I. P. = 23° 20' to the R. at Station 542 + 72.

Ext. in Tab. I opposite 23° 20' = 120.87
 $120.87 \div 12 = 10.07$. Say a 10° Curve.

Tan. in Tab. I opp. 23° 20' = 1183.1
 $1183.1 \div 10 = 118.31$.

Correction for A. 23° 20' for a 10° Cur. = 0.16
 $118.31 + 0.16 = 118.47 = \text{corrected Tangent}$.

(If corrected Ext. is required find in same way)
 Ang. 23° 20' = $23.33^\circ \div 10 = 2.3333 = \text{L. C.}$

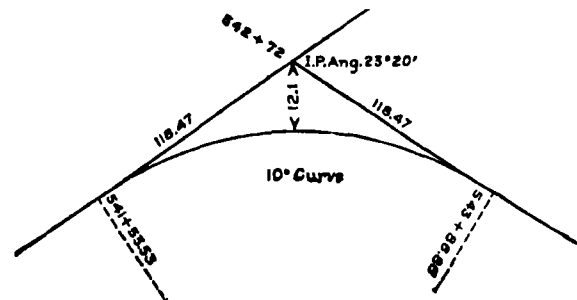
| | | | |
|-------------------------|-------|--------------|-------------|
| 2° 19½' = def. for sta. | 542 | I. P. = sta. | 542 + 72 |
| 4° 49½' = " " " | + 50 | Tan. = | 118.47 |
| 7° 19½' = " " " | 543 | B. C. = sta. | 541 + 53.53 |
| 9° 49½' = " " " | + 50 | L. C. = | 2.3333 |
| 11° 40' = " " " | 543 + | E. C. = Sta. | 543 + 86.86 |
| | 86.86 | | |

$100 - 53.53 = 46.47 \times 3' (\text{def. for 1 ft. of } 10^\circ \text{ Cur.}) = 139.41' =$

2° 19½' = def. for sta. 542.

Def. for 50 ft. = 2° 30' for a 10° Curve.

Def. for 36.86 ft. = 1° 50½' for a 10° Curve.



[illegible]

①

900-0950 Reviewed MWH's ORC Phase 3 Report.

1000 mwh continuing to work with Austgen of creating access paths in wetland areas.

1010 FedEx delivered equipment - mult
calibrating + getting ready to start sampling.

Res wells to be sampled next week will be analyzed for TCL / TAL list of parameters

1100 MWH mobilized to begin sampling MW2B and MW11 at 1002 RADER Rd. Person renting home at 1002 reported the he thought house was recently hooked up to city water

Ag 5 Pm

(2)

9/16/03

Jesse Pater

pump to tubing at MW2B

1115 MNH began purging MW2B.

1140 Parameters stabilized - pH = 7.23

Cond = 0.792; TURB = 28; DO = 2.47;

Temp = 25.2 ORP = -106; 2.6 gal purged

1142 Roll 48 Photo 10 MNH collecting VOA samples - facing N

Initial water level 27.21 ft ~~at MW2B~~

1155 MNH finished sampling & began decom.

1205 MNH began purging MW17.

1240 MNH began sampling for VOCs. Parameters:

pH = 6.37 Cond = 0.732 $\frac{mS}{cm}$ TURB 14 NTUDO = 3.08 $\frac{mg}{L}$ Temp = 16.9 ORP = -13 mV

1243 Roll 48 Photo 11 facing E of MNH collecting VOC sample at MW17.

1244 Roll 48 Photo 12 facing SE of MNH removing pump from MW17 for decom.

1300-1330 Left site for lunch. Returned to GWTP; MNH reported it removed equipment from wetlands; but drum still at well.

may have to remove with its TOKO and remove contents of drums in batches.

1400 spoke with Matt Meserch - he reported 15 week of daily PSVP ONCA monitoring started 9/8. Next weekly monitoring

Jesse Pater

(3)

9/16/03

Jesse Pater

scheduled for this Thursday. He reported that all ONCA ISVE wells online; 12 wells online in OFCA ISVE

1430 - observed MNH placing pump in MW8

1438 Roll 48 Photo 13 facing NE of MNH measuring flow rate while purging MW8.

1512 MNH collecting sample from MW8

pH = 7.62; Cond = 0.460 $\frac{mS}{cm}$; TURB = 13 NTUDO = 7.42 $\frac{mg}{L}$; Temp = 13.9; ORP = -178 mV

1520 Roll 48 Photo 14 facing N of MNH decompling pump and cord after sampling MW8.

1525 MNH setting up on MW31.

1530 Roll 48 Photo 15 facing NE of MNH measuring water level at MW31.

MNH began purging & recording parameters at MW31.

1540 Left site for day

Jesse Pater
9/16/03

④

9/18/03

Zylo EPC

1250 Arrive onsite; Clear, 80°F NE Wind

Personnel Onsite:

| | |
|----------------|-----------|
| Matt Meserich | MWH |
| Jerry Clark | Ryan |
| Charles Hardy | Ryan |
| Chad Smith | MWH |
| Rudy Stein | MWH |
| Terry Frisk | Ryan |
| * Lee Orosz | MWH |
| Tim Kirkland | Austgen |
| Mike Chenoweth | Sima Labs |
| * Rob Adams | MWH |
| * Leigh Peters | BVSPC |

1310 Spoke with L. Orosz. He reported Ryan working on nanofilter and installing an exhaust fan in the air compressor room at GWTP. L. Orosz also reported GW sampling continuing, Sima Labs collecting samples at plant to confirm MWH able to operate carbon units in recirculation mode over the weekend to confirm pH on Monday and start pulling GW into plant.

1330 Spoke with Rob Adams - MWH working on RTC for ONCA SBPA interim cover

Zylo EPC

⑤

9/18/03

Zylo EPC

and confirming soil testing with HHS for OFCA ISVE CLR. Expect to issue shortly. R. Adams reported he believes sampling team at lunch.

1400 Biweekly Construction Meeting.

Attendees - * on previous plus:

Kevin Adler EPA

via phone:

Jon Pohl MWH Chris Daly MWH

HHS: No incidents; carbon changeout took longer than expected, but without incident. MWH to clear fallen tree at P29. MWH cleared paths to GW sampling wells. MWH has 5 IDN drums from well installation activities to remove next week.

GWTP: GAC changed, reseeded biotank and recirculating to remove biomass in clarifier. Sima Labs collecting samples today - MWH plans on recirculating through GAC vessels over weekend and discharge Mon. MWH reported 1,000 gal discharged over past month - influent from OFCA/ONCA scrubber blowdown. MWH monitor startup with biomass - Reseeding occurred 9/8/03

ISVE: Running BWKS - OFCA/ONCA - 17/all wells

Zylo EPC

(6)

9/18/03

Jy S. P. R. L.

online. 3 weeks of compliance samples. Maintenance next Monday - MWH to vent lines + fill tank with water in blowdown tank.

GW sampling: To complete Res/MW's next Tuesday

Nanofilter: Training on 9/23; Ryan/Austgen complete install

Look Ahead: US Floors 10/6.

1430 Mtg Adjourned Next 10/2 @ 10 AM.

1445 Walked through GWTP with MWH and EPA

1500 Went to DNCA - observed MWH added gravel over mancatcher basins

1505 Roll 48 Photo 16 facing West of add tunnel not an d gravel/kipper over catch basin West of SVE 79

1520-1530 Spoke with Larry Campbell regarding site activities.

1535 Observed MWH begin sampling activities at MW's.

1550 Roll 48 Photo 17 facing N of MWH sampling MW23.

MWH concluding sampling for day.

12 MW's left to sample - MWH reported it will start sampling Res Wells next Tuesday.

1610 Left site for day

Jy S. P. R. L.

9/23/03

Jy S. P. R. L.

(7)

0735 Arrive onsite: 55°F, Clear; light SW wind.

Personnel Present:

Lee Orsz

MWH

Gary Crawford OSU

Tim Kirkland

Austgen

Lugh Peters

BRSL

Activities scheduled for today:

①. GW sampling - Residential wells

②. Training on nanofilter unit in GWTP.

0745 Spoke with G. Crawford of OSU - He

reported Austgen will be out this morning to set controls on nanofilter so that it operates intermittently based on level switch in ^{T-1} scrubbers ⁴⁰ this way; doesn't operate continuously - only as needed and minimize amount of permeate.

0800 Spoke with L. Orsz - He reported MWH began recirculating through carbon unit last Thursday and brought GWTP back online yesterday at noon - pumping from PGCS, MW50; MW100 and DNCA DBE wells.

L. Orsz also reported it performed maintenance on Thermo Z yesterday - minimal scaling observed - DNCA / DNCA ISVE systems back online today. L. Orsz reported MWH keeping pH of scrubber between 5-6 and has minimized scaling. L. Orsz also reported

Jy S. P. R. L.

(8)

9/23/03

J. J. E. E.

MWH to finish GW sampling today - Team not onsite yet. Austgen fixing gasket on carbon unit.

0815 MWH GW sampling team onsite - finished MW yesterday - starting residential wells today. MWH also performing PSVP monitoring of ONCA ISVE system.

0845 Roll 48 Photo 18 facing W showing MWH calibrating flow through cell.

0915 MWH began purging PW-4 at 1052 Reder Rd. MWH analyzing for full RL/TAL 1st of parameters - MWH also collecting duplicate sample at PW-4. MS/MSD - TP

0935 Roll 48 Photo 19 facing NW of MWH collecting VOC sample at PW-4

1005 MWH begin setting up at 1007 Reder Rd - PW-A

1018 Roll 48 Photo 20 facing NE of MWH labelling sampling containers and recording field parameters at PW-A.

1035 MWH collected primary and duplicate sample at PW-A

1037 Roll 48 Photo 21 facing NE showing MWH collecting VOC sample from spigot @ PW-A

J. J. E. E.

9/23/03

J. J. E. E.

(9)

1100 Returned to GWTP. L. Cross reported that Osmosis testing out nanofilter and encountering alarms to work through. Austgen reprogrammed controls. L. Cross reported lighter flow observed in clarifier - indicating newer sludge age. MWH GW team drafting letter to let residences know that MWH sampled since residents not at home.

1115-1140 Reviewed MWH GWTP report

1155 MWH mobilized to 1009 Reder Rd - PW-B. Homeowner reported that it replaced plumbing inside house and basement on Saturday.

1201 MWH began purging wells

1230 MWH began collecting samples from PW-B.

1252 Roll 48 Photo 22 facing W showing MWH collecting sample for metals analysis at PW-B.

1240 MWH completed sampling PW-B for VOCs, metals, SVOCs, Pest/PCBs and CN

1245-1315 Left site for lunch - spoke with Larry Campbell re site activities.

1318 - L. Cross reported GWTP at 20 ppm - may increase rate next week after bugs have established in activated sludge tank

1320 Roll 48 Photo 23 facing NW showing Austgen installing switch on control panel for nanofilter

1340 Observed MWH purging PW-C at 1029 Reder

J. J. E. E.

(10)

9/23/03

Joh E. Rasmussen

1400 mWH collecting sample at PWC
 pH = 7.46; Cond = 0.777; TURB = 13.6
 DO = 1.76; ORP = -141; Temp = 16.0 °C

Volume purged = 5.0 gallons

1410 mWH reported that it is waiting for homeowner at final well-treating again around 1600 or so. Returned to GWTP and observed mWH, Austgen and Ostratovics testing out nanofilter unit.

1445 Observed mWH packing gas samples. Hose m nanofilter broke under pressure during testing.

1455 Roll 48 Photo 24 facing south showing the damaged tubing on nanofilter

1530 Resident at PWD still not home - mWH collecting water level at MW38 which it missed last week.

1615 mWH check to see if resident at home but is not - mWH returning to trailer to write letter so it can schedule a sampling time for tomorrow.

1625 Left site for day

Joh E. Rasmussen
 9/23/03

(11)

10/2/03

Joh E. Rasmussen

0830 Arrive Onsite; Sunny, clear, 45-50°F

Light NW wind

Personnel Present:

| | |
|----------------|---------|
| *Lee Cross | mWH |
| Tim Kirkland | Austgen |
| Matt Mesarch | mWH |
| *Lough Picters | BV3PC |

0850 Spoke with L. Cross - He reported T. Froman of ACS called late Tuesday night to report odors coming from ONCA/SBRA ISE blower shed. L. Cross logged into system and found that Thermax 2 offline; ONCA blower off; but OFCA blower on. L. Cross shut down system - spoke with Todd Lewis and Tim Froman reported that odors also observed last Thursday when Austgen + mWH working on programming to bring nanofilter online. mWH + Austgen modified programming + attempted to restart unit yesterday; but system faulted with flow problem. Austgen looking at pumps for scrubber unit today to detect problem. Systems offline. mWH and ACS to meet with supervisors to provide additional information on Thermax sig 88 ISE systems. GWTP at 26 gpm. mWH and Austgen to gauge ISE water levels today following new HHS methods. Ryan completed

Joh E. Rasmussen



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 48 Photo #1

Date: 09-16-03 Time: 08:12

Photographer: Leigh Peters

Description: Photo facing southeast showing the riprap placed over the soil cover over the culvert drainage pipe and electrical supply to the OFCA that crosses swale 3.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 48 Photo #2

Date: 09-16-03 Time: 08:14

Photographer: Leigh Peters

Description: Photo facing northeast showing the erosion blanket installed on the northeast corner of the OFCA where ECI added topsoil to the cover.



11

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 48 Photo #3

Date: 09-16-03 Time: 08:15

Photographer: Leigh Peters

Description: Photo facing west showing the 4-inch-diameter geotextile wrapped perforated pipe installed in swale 4 to promote drainage.

12

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 48 Photo #4

Date: 09-16-03 Time: 08:16

Photographer: Leigh Peters

Description: Photo facing northwest at the ground showing the 4-inch-diameter drainage pipe and depth of placement into the OFCA cover.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 48 Photo #5

Date: 09-16-03 Time: 08:20

Photographer: Leigh Peters

Description: Photo facing southeast showing the drainage pipe installed in swales 2 and 3, meeting at the location of the former ponding near EW-20C.

Site: American Chemical Services, Inc.

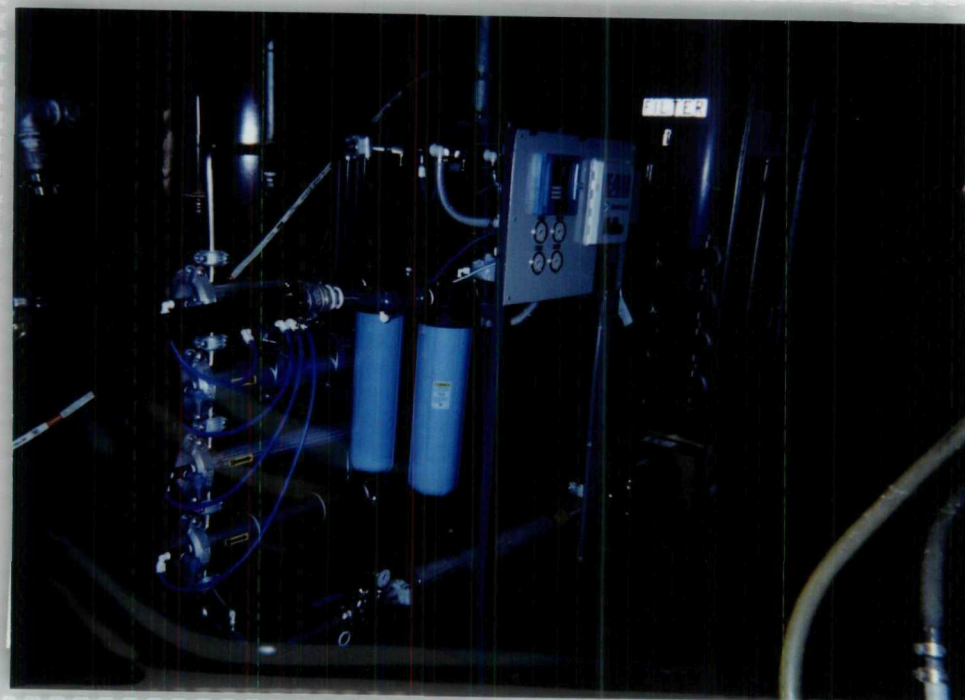
Proj. #: 46526

Roll: 48 Photo #6

Date: 09-16-03 Time: 08:25

Photographer: Leigh Peters

Description: Photo facing east showing the extended riprap placed at the entry to the retention pond covering the buried fiber optic conduit in swale 4.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 48 Photo #7

Date: 09-16-03 Time: 08:30

Photographer: Leigh Peters

Description: Photo facing north showing the erosion blanket installed along the western portion of the OFCA near swale 1. Note addition of riprap placed near former swale 5 location.

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 48 Photo #8

Date: 09-16-03 Time: 09:55

Photographer: Leigh Peters

Description: Photo facing southeast showing the nanofiltration unit installed in the GWTP.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 48 Photo #9

Date: 09-16-03 Time: 11:04

Photographer: Leigh Peters

Description: Photo facing north showing MWH connecting the pump to the dedicated tubing at MW28 in preparation for groundwater sampling activities.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 48 Photo #10

Date: 09-16-03 Time: 11:42

Photographer: Leigh Peters

Description: Photo facing north showing MWH collecting groundwater samples for volatile organic compound analysis at MW28.



11

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 48 Photo #11

Date: 09-16-03 Time: 12:43

Photographer: Leigh Peters

Description: Photo facing east showing MWH collecting groundwater samples for volatile organic compound analysis at MW17.



12

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 48 Photo #12

Date: 09-16-03 Time: 12:44

Photographer: Leigh Peters

Description: Photo facing southeast showing MWH removing the pump from MW17 for decontamination.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 48 Photo #13

Date: 09-16-03 Time: 14:38

Photographer: Leigh Peters

Description: Photo facing northeast showing MWH measuring the flow rate during purging of MW8.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 48 Photo #14

Date: 09-16-03 Time: 15:20

Photographer: Leigh Peters

Description: Photo facing north showing MWH decontaminating the pump and cord after sampling MW08.



111

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 48 Photo #15

Date: 09-16-03 Time: 15:30

Photographer: Leigh Peters

Description: Photo facing northeast showing MWH measuring the water level at MW31 prior to sampling activities.



111

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 48 Photo #16

Date: 09-18-03 Time: 13:05

Photographer: Leigh Peters

Description: Photo facing west showing the additional net and riprap placed over the ONCA SBPA catch basin west of SVE-79.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 48 Photo #17

Date: 09-18-03 Time: 15:50

Photographer: Leigh Peters

Description: Photo facing north showing MWH sampling for volatile organic compounds at MW23.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 48 Photo #18

Date: 09-23-03 Time: 08:45

Photographer: Leigh Peters

Description: Photo facing west showing MWH calibrating the water quality parameter instrument.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 48 Photo #19

Date: 09-23-03 Time: 09:35

Photographer: Leigh Peters

Description: Photo facing northwest showing MWH collecting a sample for volatile organic compound analysis at PW-Y.

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 48 Photo #20

Date: 09-23-03 Time: 10:18

Photographer: Leigh Peters

Description: Photo facing north showing MWH labeling sampling containers and recording field parameters during purging at PW-A.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 48 Photo #21

Date: 09-23-03 Time: 10:37

Photographer: Leigh Peters

Description: Photo facing northeast showing MWH collecting a sample for volatile organic compound analysis at PW-A.



Site: American Chemical Services, Inc.

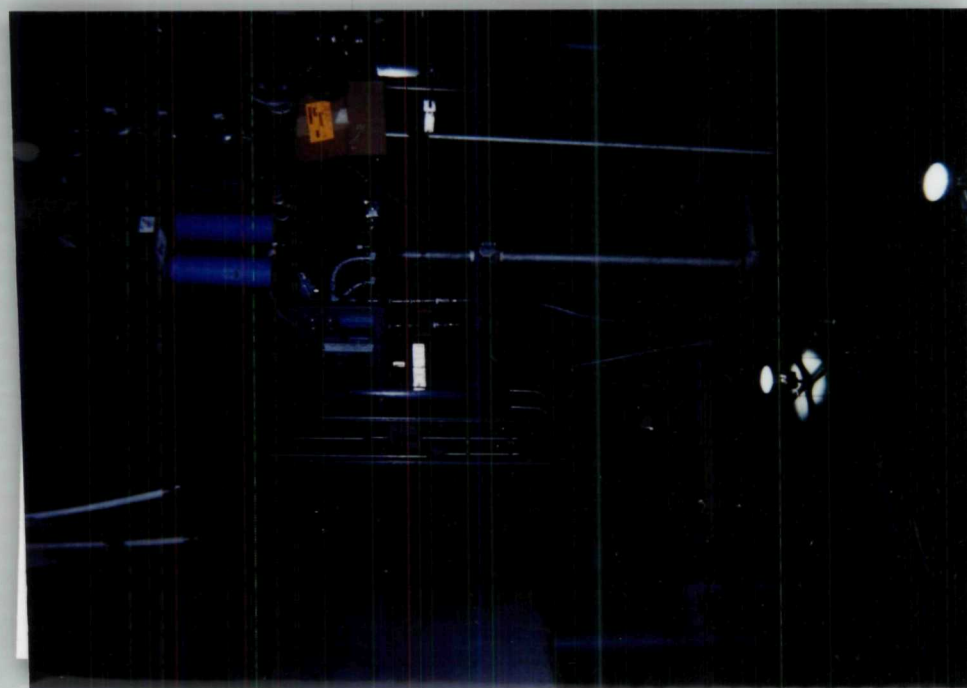
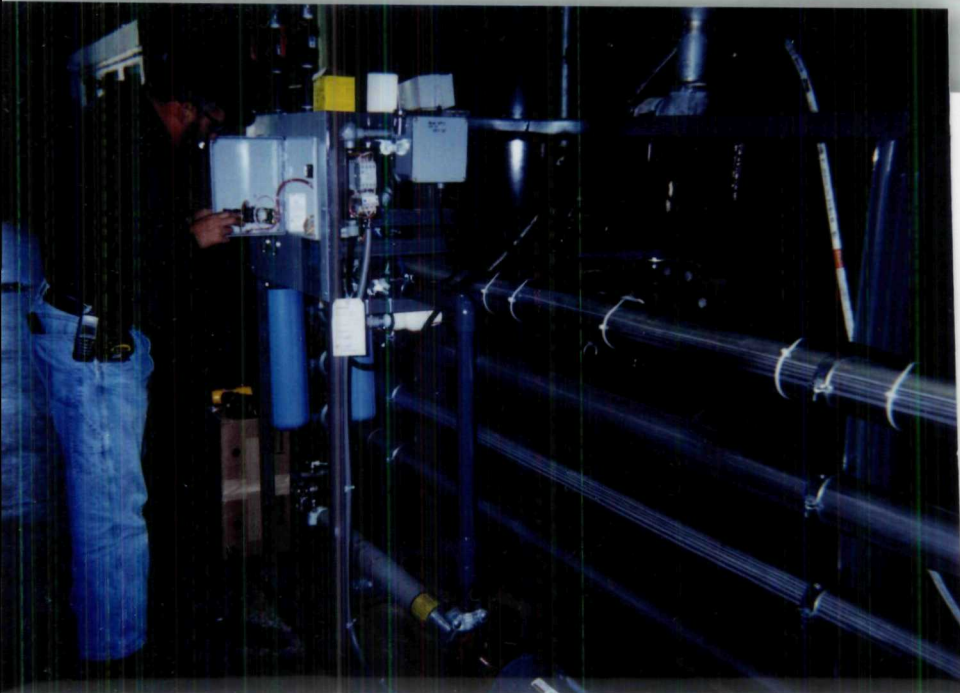
Proj. #: 46526

Roll: 48 Photo #22

Date: 09-23-03 Time: 12:32

Photographer: Leigh Peters

Description: Photo facing north showing MWH collecting a sample for metals analysis at PW-B.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 48 Photo #23

Date: 09-23-03 Time: 13:20

Photographer: Leigh Peters

Description: Photo facing northwest showing Austgen installing a switch on the control panel for the nanofiltration unit.

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 48 Photo #24

Date: 09-23-03 Time: 14:55

Photographer: Leigh Peters

Description: Photo facing south showing the damaged tubing on the nanofiltration unit.